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January 28, 2016

State Water Resources Control Board
Division of Water Rights
Water Quality Certification Program
Attn: Mr. Parker Thaler
P.O. Box 2000
Sacramento, CA 95812 – 2000

**RE: Scoping Comments on Application for Water Quality Certification Pursuant to Section 401 of the Federal Clean Water Act for the Relicensing of the Klamath Hydroelectric Project (FERC No. 2082).**

Dear Board Members and Staff:

Klamath Riverkeeper appreciates that the State Water Resources Control Board will now consider whether to grant a Clean Water Act section 401 water quality certification (401 Certification) for the Klamath Hydroelectric Project (KHP). The time is ripe for considering whether, pursuant to the requirements of the Clean Water Act, the continued operation of the KHP is appropriate. Thank you for the opportunity to comment on the scope of the Environmental Impact Report ("EIR").

We would like to incorporate by reference all written comments and accompanying attachments submitted by the Karuk Tribe, Yurok Tribe, Hoopa Valley Tribe, Klamath Tribes, Quartz Valley Indian Reservation, Pacific Coast Federation of Fisherman's Associations, Orca Conservancy, and California Water Impact Network.

Our comments below first identify the legal background and requirements that inform the scope and ultimately the sufficiency of the EIR to be developed by the State Board. Next, our comments identify the significant impairment of the Klamath River ecosystem caused by the operation of the KHP. We then focus our comments on specific issues and impacts that must be addressed in the proposed EIR.

## I. Legal Background

### A. California Environmental Quality Act (CEQA) Requirements

The foremost principle under CEQA is that the Legislature intended the statute "to be interpreted in such manner as to afford the fullest possible protection to the environment within the reasonable scope of the statutory language." (*Laurel Heights Improvement Association v. University of California* (1988) 47 Cal.3d 376, 390 – 391 [citations and internal quotes omitted].) According to the legislative intent behind CEQA, "'all agencies of the state government which regulate activities . . . which are found to affect the quality of the environment, shall regulate such activities so that major consideration is given to preventing environmental damage.'" *Id.* "The Legislature has made clear that an EIR is an informational document and that the purpose of an environmental impact

report is to provide public agencies and the public in general with detailed information about the effect which a proposed project is likely to have on the environment; to list ways in which the significant effects of such a project might be minimized; and to indicate alternatives to such a project. … Before approving the project, the agency must also find either that the project's significant environmental effects identified in the EIR have been avoided or mitigated, or that unmitigated effects are outweighed by the project's benefits." *Id.*

An EIR is a document of accountability. The purpose of an EIR is to alert the public and its responsible officials to environmental changes before they have reached ecological points of no return. The EIR must demonstrate to an apprehensive citizenry that the agency has, in fact, analyzed and considered the ecological implications of its action. If CEQA is scrupulously followed, the public will know the basis on which its responsible officials either approve or reject environmentally significant action. The EIR process protects not only the environment but also informed self-government. *Id*. at 392.

These principles must guide the EIR in order for it to be legally valid. Specifically, the EIR must analyze (a) significant environmental effects of the proposed project, (b) significant environmental effects which cannot be avoided if the proposed project is implemented, (c) significant irreversible environmental changes which would be involved in the proposed project should it be implemented, (d) growth-inducing impact of the proposed project, (e) the mitigation measures proposed to minimize the significant effects, (f) alternatives to the proposed project. All phases of a project must be considered when evaluating its impact on the environment: planning, acquisition, development, and operation.

### B. Clean Water Act Section 401 Background and Requirements

The federal Clean Water Act and implementing state and federal regulations establish a duty for the State Board to impose conditions on federally-licensed projects that impact water quality in the State. The KHP is such a project. As the agency charged by the California Water Code with protecting water quality in California, the State Board must ensure that interim and long-term operation of the KHP complies with all applicable water quality standards. Accordingly, the State Board must prepare an EIR that candidly and fairly evaluates all environmental impacts of KHP operation alternatives, including the removal of the KHP dams, to determine whether to grant PacifiCorps' requested 401 Certification.

Section 401 of the Clean Water Act provides that any applicant for a federal license for any activity that may result in a discharge to waters of the United States must present the federal licensing agency with a certification ("401 Certification") from the State in which the discharge originates which states "that any such discharge will comply with the applicable provisions of sections [301, 302, 303, 306, and 307]" of the Clean Water Act. 33 U.S.C. § 1341(a). Any 401 Certification issued must "set forth any effluent limitations and other limitations, and monitoring requirements necessary to assure that any applicant for a Federal license or permit will comply with any applicable effluent limitations and other limitations, … and with any other appropriate requirement of State law." 33 U.S.C. § 1341(d). Once issued, the terms and conditions of the 401 Certification become condition 5 on the federal license (if the license is granted). Denial of a requested 401 Certification prevents the federal agency from being able to issue the license upon which the 401 Certification is dependent.

State Board regulations require the State Board to grant or deny a requested 401 Certification. 23 C.C.R. § 3859(a). State Board regulations governing the issuance of 401 Certifications state that

"conditions shall be added to any certification, if necessary, to ensure that all activities will comply with applicable water quality standards and other appropriate requirements." 23 C.C.R. § 3859(a); *see also* 40 C.F.R. § 121.24 (stating that certification is to be granted only if the "proposed activity will not result in a violation of applicable water quality standards."). Denial is appropriate when "the activity requiring the federal license or permit will result in a discharge which will not comply with applicable water quality standards and other appropriate requirements." 23 C.C.R. § 3837(b)(1). In sum, if mitigation cannot be imposed that will guarantee compliance with all such water quality standards, then the State Board has no choice but to issue a 401 Certification requiring dam removal.

The State Board is preparing a CEQA document and concurrently determining whether to issue a 401 Certification. Accordingly the State Board must comply with the requirements of both the Clean Water Act and CEQA. In this regard, it is incumbent upon the State Board to use the CEQA process to identify the impacts of the KHP on water quality in the Klamath River watershed, evaluate all activities to determine whether they will "comply with applicable water quality standards and other appropriate requirements", and to identify and evaluate alternatives or mitigation measures (conditions) that will ensure that "applicable water quality standards and other appropriate requirements" are met. Only through complete identification and evaluation of such mitigation measures or alternatives to the proposed KHP (for incorporation as conditions in any 401 Certification) will the State Board satisfy its obligations under the Clean Water Act and CEQA when preparing this EIR.

## II. Current Non-Compliance with Water Quality Standards as a Result of Operation of the KHP

The Clean Water Act provides that when a water body is incapable of meeting water quality standards, which includes attaining all its beneficial uses, the water body must be placed on a list of impaired water bodies. 33 U.S.C. § 1313(d). This list is referred to as the 303(d) List. Due in large part to the operation of the KHP, the Klamath River is currently impaired from its mouth at the Pacific Ocean to the Oregon border. The current 303(d) List for California identifies the pollutants that cause the impairment and the source of those pollutants. According to the current 303(d) list, examples of impairment of the Klamath River caused by the KHP include:

- Impairment by microcystin toxin in the Iron Gate Reservoir due to "Hydromodification", "Upstream Impoundment", and "Flow Regulation/Modification".
- Impairment by microcystin toxin in the Copco Reservoirs due to "Hydromodification", "Upstream Impoundment", and "Flow Regulation/Modification".
- Impairment by microcystin toxin in the reach between the Iron Gate Reservoir and the Copco Reservoirs due to "Hydromodification", "Upstream Impoundment", and "Flow Regulation/Modification".
- Impairment by temperature in the Oregon to Iron Gate Dam Reach due to "Hydromodification", "Upstream Impoundment", and "Flow Regulation/Modification"
- Impairment by organic enrichment/low dissolved oxygen in the Oregon to Iron Gate Dam Reach due to "Upstream Impoundment", and "Flow Regulation/Modification"
- Impairment by nutrients in the Oregon to Iron Gate Dam Reach due to "internal nutrient cycling (primarily lakes)"
- Impairment of two reaches of the Klamath River immediately downstream from the Iron Gate Dam by microcystin toxin due to "Hydromodification", "Upstream Impoundment", and "Flow Regulation/Modification".

- Impairment by temperature in the Iron Gate Dam to Scott River Reach due to "Hydromodification", "Upstream Impoundment", and "Flow Regulation/Modification"
- Impairment by organic enrichment/low dissolved oxygen in the Scott River to Trinity River Reach due to "Upstream Impoundment", "Flow Regulation/Modification"
- Impairment by nutrients in the Scott River to Trinity River Reach due to "Upstream Impoundment"
- Impairment by temperature in the Scott River to Trinity River Reach due to "Hydromodification", "Dam Construction", "Upstream Impoundment", and "Flow Regulation/Modification"
- Impairment by organic enrichment/low dissolved oxygen in the Klamath Glen Reach due to "Upstream Impoundment", "Flow Regulation/Modification"
- Impairment by temperature in the Klamath Glen Reach due to "Hydromodification", "Dam Construction", "Upstream Impoundment", and "Flow Regulation/Modification"

As the 303(d) List documents, the current operation of and discharges from the KHP cause violations of water quality standards. Any 401 Certification issued to PacifiCorp must include conditions of operation that will prevent those violations of water quality standards and ensure attainment of all beneficial uses. To date, no proposed alternative - other than decommissioning of at least four KHP dams - has been demonstrated capable of meeting this requirement.

The beneficial uses applicable to the Klamath River within the KHP and downstream of discharges from the KHP include: Native American cultural use; water contact recreation; non-contact water recreation; commercial and sportfishing; warm freshwater habitat; cold freshwater habitat; wildlife habitat; habitat for rare, threatened, or endangered species; migration of aquatic organisms; shellfish harvesting; aquatic life spawning, reproduction, or early development; and potential municipal and domestic water supply, and agricultural supply. *See* Water Quality Control Plan for the North Coast Region ("Basin Plan") at 2-6.00. Each of these uses must be protected by the conditions imposed on KHP operations by any 401 Certification. Accordingly, the impact of the KHP operation and its discharges on each and every one of these beneficial uses must be evaluated in the EIR.

## III. The EIR Must Consider the Entire KHP, not Just Those Components Located in California

Under CEQA, the "project" is the "the whole of an action, which has a potential for resulting in either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment." (Pub. Res. Code § 21065; CEQA Guideline 15378(a)[1].) It is improper to divide a project into separate parts to avoid CEQA review. (*McQueen v. Bd. of Directors of the Mid-Peninsula Regional Open Space District* (1988) 202 Cal.App.3d 1136, 1143-1144.) CEQA mandates " that environmental considerations do not become submerged by chopping a large project into many little ones – each with a minimal potential impact on the environment – which cumulatively may have disastrous consequences." (*Bozung v. Local Agency Formation Com*. (1975) 13 Cal. 3d 263, 283-284.)

The EIR must evaluate the impacts of KHP operations and discharges both in Oregon and California. The project is located in both states. The Klamath River flows from Oregon into California and KHP operations in Oregon will affect the environment in California. For example,

[1] The CEQA regulations are located in Title 14, California Code of Regulations and referenced as "CEQA Guideline." Great weight must be afforded the Guidelines. (*Laurel Heights I*, *supra*, 47 Cal.3d at 391, fn.2.)

the Clean Water Act 303(d) List identifies KHP impairment from upstream of the California reaches of the Klamath River, including temperature impairment of the reach from the Oregon border to Iron Gate Dam caused by "Upstream Impoundment". It is beyond dispute that the portions of the KHP in Oregon have impacts on and physically change the environment in California, and therefore under CEQA they must be evaluated in the EIR.

In addition, the law governing the State Board's 401 Certification decision requires the EIR to evaluate the conditions that must be imposed on the elements of the KHP that exist outside of California, but that affect water quality in California. PacifiCorps must obtain a 401 Certification from both Oregon and California. As a practical matter, California cannot evaluate the impacts of the KHP solely in California without consideration of the impacts of portions of the KHP in Oregon, as those impacts directly influence the environmental conditions under which the KHP facilities in California are operated. Moreover, section 401(a)(2) of the Clean Water Act grants the State Board authority to determine whether the portions of the KHP in Oregon impact waters in California, and if so demand imposition of conditions on the KHP in Oregon to protect California's waters. *See* 33 U.S.C. § 1341(a)(2). It would be inappropriate for the State Board to take anything but a holistic approach to evaluation of the KHP, specifically because it has the power under the Clean Water Act to condition the grant of Oregon's 401 Certification should it conclude that impacts to California waters must be mitigated through actions at Oregon facilities.

**IV. Baseline for Analysis of Environmental Impacts**

An EIR's environmental setting will "normally" constitute the baseline physical conditions by which the lead agency determines whether an impact is significant. (CEQA Guideline 15125(a)). Here, however, because the proposed project is a 401 Certification, and requires the State Board to determine that the activities at issue will comply with water quality standards, the proper baseline for analyzing water quality impacts should be pre-dam conditions, *i.e.*, before the dams and associated disruption of flow and connectivity of the river. Setting the baseline at pre-dam conditions does not require hypothesizing about what the Klamath Basin was like prior to any development in the region. Rather, it requires consideration of impacts from all sources of impairment causing conditions, such as nutrient loading from non-point sources, as though the KHP did not exist. Only in this way can the EIR fulfill its function of demonstrating "that the significant environmental impacts of the proposed project were adequately investigated and discussed" and "permit the significant effects of the project to be considered in the full environmental context." (CEQA Guideline 15125(c)).

Moreover, the EIR should discuss all inconsistencies between the proposed project and applicable general plans and regional plans, including water quality control plans. CEQA Guideline 15125(d). This EIR, therefore, must describe the KHP's on-going non-compliance with the Basin Plan. For example, as identified above, the KHP as currently operated prevents the attainment of numerous beneficial uses. The EIR must describe, and explain, how each of the proposed alternatives (including the proposed conditions on operation, if applicable) will ensure consistency with and attainment of the designated beneficial uses in the Basin Plan. Only through setting the environmental baseline at pre-dam conditions will it be possible to evaluate how the KHP, if permitted, will ensure compliance with water quality standards.

Finally, because the relicensing of the KHP would result in authorization for the KHP to continue to exist, the EIR must evaluate the impacts of the KHP against baseline conditions that would exist without the KHP. For example, the KHP must not impair beneficial uses, including fish migration, which means that in order to be granted a 401 Certification, fish passage must be provided. The

baseline against which to measure the impacts of the KHP is thus the conditions absent the dams, when fish passage beyond the KHP would exist.

## V. The Range of Alternatives Considered Must Include Dam Removal

As currently proposed by PacifiCorp in its 401 certification application, the mitigation measures to reduce the impacts of the KHP will not be sufficient to comply with water quality standards or other requirements. As such, for the State Board to grant a 401 Certification, the State Board must analyze alternatives, which if implemented by PacifiCorps as conditions to its FERC license, would justify and support granting the requested 401 Certification. To this end, the State Board should engage in a robust evaluation of an alternative that includes removal of J.C. Boyle, Copco No. 1, Copco No. 2, Iron Gate and Keno Dams. The State Board should also analyze an alternative that would have the KHP operated in a run-of-the-river state. Robust analysis of each of these alternatives, in addition to others proposed in the notice of preparation, would ensure that conditions that will ensure the KHP does not prevent attainment of water quality standards are developed and imposed through a water quality certification.

This point is particularly important to Klamath Riverkeeper, as spurring action by PacifiCorps and FERC to ensure the restoration of the Klamath River to a condition that supports beneficial uses and meets water quality standards is essential. Over the past 10 years, PacifiCorp's FERC license has been administratively extended while interested parties have attempted to reach a political solution that would improve conditions in the watershed. In these intervening years conditions have only gotten worse. Now is the time for the State Board to take action to ensure that the waters it is charged with protecting are in fact protected. The best means to achieving this end is through developing conditions to a water quality certification that protect our waters. It is our opinion, based on the robust studies and literature available on the issue, that the only means of doing so is by conditioning the 401 Certification with terms that allow for well-planned and executed removal of the dams, with interim mitigation measures that provide for operation of the KHP through the decommissioning process.

The notice of preparation identifies the objectives of the "CEQA Project" to be to "modify the KHP, as needed, to comply with California water quality standards, and in conformance with mandatory conditions established as part of the FERC license process." Only through detailed and sufficient analysis of a range of alternatives that includes removal of the KHP dams can this end be achieved.

## VI. The EIR's Analysis of Significant Impacts Must Be in Relation to Their Severity

Identification of a project's significant environmental impacts is a central purpose of an EIR and is necessary to implement CEQA's policy of informed decision-making. (Pub. Res Code §§ 21002.1(a), 21003.1(b).) Significant impacts should be discussed with emphasis in proportion to their severity and probability of occurrence, and EIRs should be "prepared with a sufficient degree of analysis to provide decision-makers with information which intelligently takes account of environmental consequences." (CEQA Guidelines §§ 15151 & 15143; *San Joaquin Raptor/Wildlife Resource Center v. County of Stanislaus* (1994) 27 Cal.App.4th 713, 736.)

### A. Impacts from Toxic Algae Must Be Fully Analyzed

The EIR must analyze the environmental impacts of the proposed project and the proposed alternatives related to microcystin toxins produced by toxic cyanobacteria (blue-green algae) *Microcystis aeruginosa* ("MSAE"). Since adoption of the 2007 FEIS by FERC there have been

several developments that require robust examination of this impact in the EIR. For example, several reaches of the Klamath River within and below the KHP have been added to the 303(d) List as impaired by microcystin toxins since the 2007 FEIS was prepared. Moreover, the identified causes of each of these impairments include conditions created by the KHP, including river impoundment and hydromodification. For brevity here, we specifically refer the State Board to our February 23, 2009 comments in response to the State Board's notice of preparation of an EIR related to PacifiCorps' application (then) for water quality certification for the KHP. The impacts caused by MSAE and microcystin toxins created by KHP operations must be analyzed in the EIR.

### B. The EIR Must Analyze Adverse Water Temperature Impacts

The EIR must consider the adverse thermal impacts of the dams and the KHP as a whole. While the FERC EIS does address this impact, the analysis should be more robust. The slack-water reservoirs created by the KHP dams soak up sunlight and thus stay much warmer than a natural, free-flowing river. Currently, the Klamath River does not meet water quality standards as a result of temperature modifications caused by KHP operations.

By increasing water temperatures, the dams create: (1) ideal conditions for the breeding of toxic algae in the reservoirs, as well as good conditions for breeding fish parasites downstream, such as *Ceratomyxa shasta* and *Parvicapsula minibicornis*; (2) lower dissolved oxygen (DO) levels in the reservoir and in the river (DO levels are inversely proportion to water); (3) massive algae blooms of both toxic and non-toxic species (algae blooms are greatly encouraged by warmed water and slow-flowing conditions in the reservoirs, and these algae blooms suck DO out of the water as well as decay into sources of ammonia, which is at unnaturally high levels in the reservoirs generally and highly poisonous to fish).

The EIR must analyze the impact that all proposed operational alternatives will have on water temperature within, and downstream of the KHP area. This must include an analysis of impacts of temperature modification, and the subsequent discharge of temperature-modified water, from Oregon elements of the KHP.

### C. The EIR Must Analyze Native American Beneficial Uses and Health Impacts to Klamath Basin Tribes

The EIS should fully incorporate Native American beneficial uses of the Klamath River. The North Coast Water Quality Control Plan (Basin Plan) includes Native American cultural beneficial uses for culture and subsistence fishing. Moreover, SWRCB staff are in the process of developing statewide beneficial uses pertaining to tribal traditional and cultural, and subsistence fishing. These statewide standards will be addressed at SWRCB's February 16, 2016 board meeting. Current beneficial uses are hindered by water quality that limit the availability of traditional food and restrict cultural practices that require contact with water.

The impact of the KHP on the diet and health of subsistence communities, including Native American communities, must also be analyzed by in EIR. The FERC EIS did not adequately address this impact. There is substantial evidence that by decreasing the Klamath River's ability to support a stable and robust salmon fishery, operation of the KHP causes health impacts to the Native American tribes that depend on the Klamath River for subsistence. For example, Dr. Kari Marie Norgaard found "overwhelming evidence that the elimination of traditional foods has had adverse health, social, economic, and spiritual effects on Native American people." Kari Marie Norgaard, *The Effects of Altered Diet on the Health of the Karuk People* at 1 (2004) ("Norgaard").

In fact, because salmon were the most important element of the traditional diet in the region, "it should come as no surprise that the destruction of the fishery has resulted in both poverty and hunger." Norgaard, P 6. Among the causes of the destruction of the salmon fishery is the KHP. Norgaard P. 17. The impacts to the diet and health of the people dependent on the salmon and other food sources effected by the operation of the KHP must be analyzed in the EIR.

### D. Other Impacts of the Proposed Project and Alternatives that Must Be Analyzed in the EIR

1. Nutrient Cycling: The EIR must address the impacts of the KHP on nutrient cycling in the Klamath River. By changing the hydrograph of the Klamath River, the KHP changes the nutrient capturing and nutrient cycling functions of the river. Evidence of the severe problems caused by these changes includes the impairment by nutrients in all reaches the Klamath River within and immediately downstream of the KHP.

2. Water Stratification and Creation of Anoxic Conditions Downstream: The slack-water reservoir behind Iron Gate Dam stratifies into two distinct water layers, leaving the lower levels of the lake very poor in dissolved oxygen. When this anoxic water flow downstream, it smothers in-stream salmon and other fish species, creating the potential for fish die-offs far down river. This impact of the KHP was not adequately addressed by the FERC EIS and must be addressed by the EIR. Necessary operational conditions must be imposed to prevent significant adverse impacts caused by water stratification.

3. Greenhouse Gas Production by the KHP Operations: The FERC EIS did not adequately address climate change impacts related to the KHP. These impacts, including those arising from methane gas production at the KHP reservoirs, need to be considered and analyzed in h the EIR.

4. Altered Stream Structure: The KHP alters the stream structure of the Klamath River and this impact must be considered in the EIR. Alterations include: lack of scouring, algae buildups that can host polychaetes and parasites, altered pool and stream channel dynamics, woody debris deficits, riparian vegetation density and distribution. All of these alterations have significant impacts on beneficial uses such as coldwater fisheries, spawning, migration, Native American cultural uses and rare species. These alterations also increase incidence of fish disease, degrade habitat, and degrade food sources and quality and therefore need to be considered and analyzed in the EIR.

### E. Growth-Inducing Impact of the Proposed Project Must Be Analyzed

The EIR must discuss the ways in which the proposed project could foster economic or population growth either directly or indirectly, in the surrounding environment. Included in this are projects which would remove obstacles to population growth (a major expansion of a waste water treatment plant might, for example, allow for more construction in service areas). Increases in the population may tax existing community service facilities, requiring construction of new facilities that could cause significant environmental effects. Also, the EIR must discuss the characteristics which may encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively. It must not be assumed that growth in any area is necessarily beneficial or of little significance to the environment. CEQA Guideline 15126(d).

### F. Climate Change Impacts of the Proposed Project Must Be Analyzed

The EIS should analyze current and future impacts of climate change pursuant to The California Climate Adaptation Strategy adopted in 2009 and updated in 2013. Climate models predict periods of lower precipitation levels and warmer temperatures. The accompanying warmer water temperatures and lower river flows can contribute to increased levels of toxic algae, additional stress on freshwater fisheries, and reduced food for marine mammals that depend on anadromous fisheries. Adaptation to these impacts makes dam removal even more imperative because it will reduce algae growth and increase the quantity and quantity and quality of aquatic habitat. We urge you to develop an EIS that complies with the CA Climate Adaptation Strategy recommendations to preserve public health, biodiversity and habitat, ocean and costal resources, and water. The EIS should also comply with recently released draft CEQA guidelines that provide for use of future baseline scenarios, if "supported by reliable projections based on substantial evidence in the record".

## VII. The EIR Must Fully Analyze Mitigation Measures and Their Feasibility

In addition to assessing a project's significant and cumulative impacts, an EIR is also required to set forth and analyze mitigation measures to eliminate or minimize each significant impact. (Pub. Res. Code §§ 21002, 21002.1(a) & (b); CEQA Guidelines §§ 15126(e), 15126.4.) Mitigation measures must be designed to minimize, reduce, rectify or compensate for the project's impacts. (CEQA Guideline Pub. Res. Code § 15370.) Analyzing "the manner in which [the] significant effects can be mitigated or avoided" is one of the main functions of an EIR. (§ 21002.1(a).) As with all aspects of an EIR, the discussion of mitigation measures must be "prepared with a sufficient degree of analysis to provide decisionmakers with information which enables them to intelligently take account of environmental consequences. The courts have looked for adequacy, completeness and a good faith effort at full disclosure." (CEQA Guideline § 15151.)

The State Board's duty to develop and impose sufficient mitigation measures is particularly important here, where the overriding substantive requirements it must comply with prior to granting a 401 Certification compel it to include conditions in any certification that ensure the KHP complies with water quality standards. As such, it is essential that any mitigation measures be shown to be feasible, not simply possible or available. (*See Kings County Farm Bureau v. City of Hanford* (1990) 221 Cal.App.3d 692, 728.) In *Kings County*, the Court held that the agency could not rely on a groundwater recharge agreement with the local water district without first evaluating whether the agreement was feasible, *i.e.* whether there was sufficient water available for purchase. (*Id.*) The failure to assess the measure's feasibility was fatal to a meaningful evaluation of the project's impacts. (*Id*.) Applied here, the EIR must analyze the feasibility of PacifiCorp's proposed operational changes to be certain that they are economically and technologically feasible. Plans to study potential future changes to the KHP and implement them later if they are successful, cannot satisfy the State Board's duty to consider the feasibility of PacifiCorps' proposed mitigation measures.

Mitigation measures proposed in the EIR must also be shown to be effective. An EIR is inadequate if its proposed mitigation measures are so undefined that it is impossible to evaluate their effectiveness. (*San Franciscans for Reasonable Growth v. City & County of San Francisco* (1984) 151 Cal.App.3d 61, 79.) Other than dam removal, PacifiCorp has yet to demonstrate mitigations likely to effectively remedy the MSAE and microcystin toxins problem. For example, microcystin measurements taken by PacifiCorp in the vicinity of Solar Bee circulators deployed in Copco Reservoir in 2008 do not show toxin reduction compared to stations located in areas not influenced

by Solar Bee circulation (CH2MHill 2008), and the "curtain" deployed at the Iron Gate log boom did not prevent a pulse of MSAE cells from being washed downstream in September of 2008.

Numerous mitigation measures proposed by PacifiCorp have been tried already, but have not resulted in compliance with water quality standards. As part of interim measures under the Klamath Settlement Agreements, PacifiCorp failed to meet water quality standards by employing oxygenation techniques, applying algaecides, and selective withdrawal from Iron Gate Reservoir. All operational alternatives set forth in the EIR must be analyzed for their effectiveness.

## VIII. Analysis of Cumulative Impacts Must Involve Consideration of the Impacts of the Project in Combination with Past, Present, and Reasonably Foreseeable Projects

An EIR must adequately analyze and discuss significant cumulative impacts of the project. (*Laurel Heights, supra,* 47 Cal.3d at 394; CEQA Guideline § 15130.) A mandatory finding of significance is required if the possible effects of a project are individually limited but "the incremental effects of an individual project are considerable when viewed *in connection with* the effects of past projects, the effects of other current projects, and the effects of probable future projects." (Pub. Res. Code § 21083(b); CEQA Guideline § 15065(c), emphasis added.) "Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time." (CEQA Guideline § 15355(b); *Communities for a Better Environment v. California Resources Agency* ("*CBE*") (2002) 103 Cal.App.4th 98, 114; *Kings County supra,* 221 Cal.App.3d at 720–721.) The cumulative impacts analysis is essential in preventing impacts, which are individually minor but cumulatively considerable, from overwhelming the environment. (*Bakersfield Citizens for Local Control v. City of Bakersfield* (2004) 124 Cal.App.4th 1184, 1214.) California courts have repeatedly found that analysis of cumulative impacts is among the primary EIR functions. "[I]t is vitally important that an EIR avoid minimizing the cumulative impacts. Rather, it must reflect a conscientious effort to provide public agencies and the general public with adequate and relevant information about them." (*Mountain Lion Coalition v. Fish & Game Com*. (1989) 214 Cal.App.3d 1043, 1051; *Kings County*, *supra*, 221 Cal.App.3d at 723.)

CEQA requires an analysis of past projects as part of an adequate cumulative impacts analysis. The California Supreme Court held recently that the statutory injunction to assess "the incremental effects of an individual project . . . in connection with the effects of *past projects*, the effects of other current projects, and the effects of probable future projects" (Pub. Resources Code, § 21083, subd. (b)(2), italics added) signifies an obligation to consider the present project in the context of a realistic historical account of relevant prior activities that have had significant environmental impacts. *Environmental Protection and Information Center v. California Department of Forestry and Fire Protection* (2008) 44 Cal. 4th 459, 523. "Such historical accounting assists, for example, in understanding development trends. (See Governor's Off. of Planning & Research, General Plan Guidelines (1990) pp. 44-46 [need to understand population, environmental and economic trends, including historical data, to guide development].) This historical information also may help to identify previous activities that have caused intensive environmental impacts in a given area, the full effects of which may not yet be manifested, thereby disclosing potential environmental vulnerabilities that would not be revealed merely by cataloging current conditions." *Id*. An analysis of past projects in an EIR "must reasonably include information about past projects to the extent such information is relevant to the understanding of the environmental impacts of the present project considered cumulatively with other pending and possible future projects." *Id.* at 524.

Here impacts of past projects specifically include the impacts of the last half-century of KHP construction and operation on the Klamath River. The impacts of all the dams and diversions of the

KHP must be evaluated. The dams whose impacts must be evaluated as part of the EIR's cumulative impact analysis include, but are not limited to: the J.C. Boyle Dam; the Link River Dam and its associated East Side and West Side developments; the Keno Dam; Copco No. 2; Copco No. 1; the Iron Gate Dam; and the Fall Creek diversion dam. The impacts of the bypass reaches for each of these dams must also be analyzed.

A cumulative impacts analysis that includes past impacts of the operation of the KHP itself is also essential to evaluating the KHP as proposed, as well as any alternatives. The current environmental context in which PacifiCorps' proposal operates is inextricable from the impacts the KHP has had since its inception. Only by considering these impacts will the State Board be capable of evaluating whether continuing to operate the KHP will comply with water quality standards. And any analysis of the historical impacts of the KHP clearly demonstrates that continued operation of these facilities will have significant negative impacts on the environment. A failure to analyze these impacts on the other hand would likely result in a conclusion that the KHP (as proposed in PacifiCorps' application) will have a neutral or positive impact on the environment (because with the measures PacifiCorps proposes to mitigate its impacts, the overall conditions in the watershed will improve). However such a conclusion would be illusory, as decades of data and information have demonstrated that the mere operation of the project devastated the watershed. As explained elsewhere, no amount of mitigation short of well-paced decommissioning and removal of the KHP facilities will feasibly and effectively mitigate the impacts of the KHP.

Finally, the EIR must also include a description of the geographic scope of the cumulative impact analysis. The EIR must, as the NOP itself acknowledges, include a discussion of the cumulative impacts of elements of the project (past, present, and future) in Oregon, as well as any downstream past, present, or future projects.

## IX. The EIR Must Be Supported by Substantial Evidence

Under CEQA, environmental conclusions of impacts, mitigations and overriding considerations must be supported by substantial credible evidence. Attached hereto are a list of some of the reports and other evidence that the State Board must consider in evaluating the project's impacts, mitigation proposals, and alternatives. We request that the State Board pay particular attention to the numerous documents and studies that have been developed since the 2007 FEIS was adopted. These materials make considerable contributions to the understanding of the impacts of the KHP, as well as the effectiveness and feasibility of mitigation efforts. The EIR and its findings and conclusions must be supported on substantial evidence, and thus we urge the State Board to ensure that its EIR is in fact supported by a full and fair consideration of the facts and data in these documents.

Thank you for your careful consideration of these comments. Please include Klamath Riverkeeper (at the address above) and our legal counsel Drevet Hunt and Daniel Cooper at Lawyers for Clean Water, 1004 A O'Reilly Avenue, San Francisco, California 94129 in your future notices of action on this project and your CEQA compliance.

Sincerely,

Konrad Fisher

Konrad Fisher, Executive Director

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